

## REMARKS

The Office action mailed 16 January 2007, has been received and its contents carefully noted. The pending claims, claims 1-7, were rejected. By this Response, claims 1-7 have been canceled and claims 8-26 have been added. Support may be found in the specification and the claims as originally filed. No statutory new matter has been added. Therefore, reconsideration and entry of the claims as amended are respectfully requested.

### Invention Disclosure Statement

The Examiner indicated that the Information Disclosure Statement filed 10 June 2005 fails to comply with 37 CFR 1.98(a)(3) because it does not provide a concise explanation in English for each patent or document provided in a foreign language. Applicants note that on national stage filing of this case, an English language version of the International Search Report was provided with a description of relevance which, in accordance with MPEP 609.04 satisfies the concise explanation of relevance requirements. That is, MPEP 609.04 sets forth the following:

Where the information listed is not in the English language, but was cited in a search report or other action by a foreign patent office in a counterpart foreign application, the requirement for a concise explanation of relevance can be satisfied by submitting an English-language version of the search report or action which indicates the degree of relevance found by the foreign office. This may be an explanation of which portion of the reference is particularly relevant, to which claims it applies, or merely an "X", "Y", or "A" indication on a search report.

Although it is believed that the requirements of 37 CFR 1.98 were satisfied with the earlier filing, Applicants provide below an English explanation of each of the three foreign language documents:

1. ZHONG you-ping, ET AL.; "Techniques for industrialization of cultivation and seed breeding of abalone along the southern coast of China", Journal of Jimei University (National Science), (1999) 4(1):51-52

In this article, studies on culture species selection, seed breeding, diet for abalone *Haliotis diversicolor*, prevention of disease, culture technology and management in the intensive abalone farming industry along the southern China were summarized. Moreover the problems in the

intensive cultivation were discussed.

The broodstock of *Haliotis diversicolor* are selected from 2-3 years old individuals with a body size of more than 6cm shell length. Moreover, the broodstock require a high ripeness degree of both male gonads (testis) and female gonads (ovaries). Generally, individuals of which gonadic parts shall cover the parts of the stomach and liver, or extend beyond the shell edges are considered fine broodstock. Colors of the ovaries in the female breeders of *H. diversicolor* are dark purple or deep green and testes cream to white or slight yellow.

2. SHEN jue-fen, ET AL. "Commercial seedling rearing of abalone *Haliotis discus hannai* in southern Shandong", Marine Sciences, (1996) No. 1:6-7

Discloses the following:

Broodstock conditioning - For the purpose of avoiding the times of high seawater temperature when juvenile abalones were repelled from the transparent waved-plates, and improving the larger seeds ratio of more than 1.2cm shell-length, the work of broodstock conditioning shall be conducted in as early as November. For example in hatchery in Rizhao, Shandong, abalone individuals from wild populations were captured as broodstock in November 1993, and then conditioned beginning in February 1994 until achieving gonads ripening.

Density - The broodstock of 588 individuals including 421 female and 167 male abalones were cultured in 5 tanks, and each tank was of 4 cubic meters volume. The condition of density of the broodstock was kept at a stocking density of 30 individuals per cubic meters. Females and males could be conditioned together in the beginning days, however, they shall be separated according to the gonad mature degree in the later days of conditioning.

Water-changing - A tank-whole water changed each day when females and males were conditioned together. While, when they were separated, the water changed once each day but t1/2-2/3 tank water changed. Before water-exchanging each time, siphoning operation was needed for the purpose of defecating the scorns on the bottoms of the tanks.

Water temperature - Before March 1994, temperatures of conditioning water were elevated on an extent of 0.1-0.5°C. Then, the temperature could be elevated on an extent of 0.5°C until the males were conditioned in the water of 18°C and females in 20°C.

Diets - Natural macroalgae including *Laminaria japonica* and *Undaria pinnatifida* were given daily at 10-20% total body weight of the breeders. The diets given everyday shall be adjusted according to the breeders actual ingestion.

Aeration - Aeration was provided 24 hours every day.

Spawning and fertilization - On 26, April 1994, well-developed mature abalone

individuals the effective cumulated temperature of which got to more than 850°C-D were selected as breeders. One characteristic of the mature breeders was that the gonads developed tower above the shell edges. The females' were in deep-greenish while the males' cream to white. The benthic diatoms as the post-larval diets were prepared sufficiently before spawning. Abalone spawning were conducted continuously in April 26, May 30, May 5 and May 11. 224 mature females and 44 males were induced to spawn and  $2394.9 \times 10^4$  eyed larvae were obtained. Fertilization rates were more than 90%, while hatching rates were 30-48.2%.

Spawning - Abalone of mature gonads were selected as breeders in a ratio of female 5: male 1. the breeder were induced to spawn by desiccation for 1 hour, and immersing in seawater treated with 400~500mwh/L Ultra-violet and elevated at the temperature of 22~23°C for 2 hours. The males began to release sperms first and the female began to shed eggs 0.5 hour later. The breeder released gametes on a peak time between 21:00 and 23:00 in the night. The insemination was conducted in a proper ratio between sperms and eggs. The fertilized eggs were washed 5-6 times, and then transferred to hatch in larger volume tanks later.

Hatching - The embryonic nursing was conducted in a density of 10-15 larvae per ml. The seawater used was filtrated by grits and active carbons. When the larvae hatched and moved to the surface of the seawater, measures were taken to remove the dead, abnormal eggs at the bottom of the seawater. Water-changing were conducted by 120um mesh filtration by 1/2 to 2/3 per time. Veligers were nursed by aeration tightly and began to appear eyed-spot 48-54 hours after fertilization. After 70 hours, eyed larvae were put to seedling pools for attachment and metamorphosis.

3. LIU cong-de, "Techniques for industrialization of seed breeding of abalone *Haliotis discus hannai* Aquaculture, (1999) 1:3-4

Discloses the following:

Spawning and juvenile nursing - On the night of July 10, 1996, post-larvae obtained in the sap were transferred to the hatchery loaded by buckets. The larvae were put into the seedling pools for attachment. The seawater in the seedling pools were 6°C higher than the post-larvae hatching seawater. The results were that few larvae attached to the surface of attaching plats, and dead larvae were found.

On May 27, 1997, attaching plats were deposited into the seedling pools first. At 18:00, post larvae were counted and put into the seedling pools. 2,300,000 post-larvae successfully attached to the surface of the attaching plats. On May 29, few pelagic larvae were found in the seawater. The ecological factors of the seawater were tested and recorded as follows:

Temperature, 21~22 0C; Salinity, 28.5%; OD value, 5.2mg/L. Water changing was conducted twice a day and 1/2 of the water changed once. After changing water, fertilizers of N 10: P 1 were put to the water for the purpose of accelerating the development to the benthic diatoms. Metriphonate in density of  $1.5 \times 10^{-6}$  was added to the seawater when were found. After 15 hours, the water changed totally.

Applicants note that accompanying the Office Action was a PTO-1449 form with initials adjacent the three above-noted references signifying a review of the references to the extnt possible. Thus, it is not believed that a new PTO-1449 form is required, but Applicants respectfully request clarification in the record that the requirements of 37 CFR 1.98 are considered satisfied in the present application.

**Rejection under 35 U.S.C. 112, second paragraph**

The Examiner rejected the claims under 35 U.S.C. 112, second paragraph, as being in narrative form.

Applicants respectfully assert that the claims, as amended, are clear and definite and the rejection under 35 U.S.C. 112, second paragraph, should properly be withdrawn.

**Request for Interview**

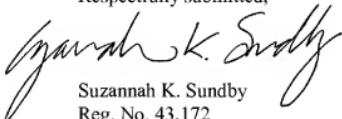
Applicants respectfully request either a telephonic or an in-person interview should there be any remaining issues.

### CONCLUSION

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, in the event that additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. §1.136(a), and any fees required therefor are hereby authorized to be charged to **Deposit Account No. 02-4300**, Attorney Docket No. **034176R002**.

Respectfully submitted,



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